

Advantage Client-Server Database

Advantage Database Server is a complete, high performance client/server data management solution for stand-alone, networked and Internet applications. Advantage Database Server allows the Integra Energy Management System to combine powerful SQL statements and relational data access methods with the performance and control of navigational commands. Using optimized data access, Advantage provides security, stability, and data integrity with zero administration. Advantage is easily installed on existing network infrastructures and delivers the client/server performance, stability and data integrity that your business demands.

Performance

The client/server processing and high-speed database engine of Advantage Database Server means significantly less network traffic and better performance. Network traffic and concurrency are formidable problems for non-client/server multi-user database applications. These applications cause large amounts of network traffic because the client machine performs all database processing. Advantage Database Server optimizes multi-user performance by intelligently dividing database operations between the client and the server. Client/server architecture moves the processing of database requests to the server, where the data is stored, which dramatically reduces network traffic.

Communications Compression

Communications compression provides reduced network traffic between Integra and the Advantage Database Server. At the high end of the spectrum, compression may provide a 100% to 500% speedup when using slow networks (dial-up) with encrypted data. In "normal" situations with reasonably fast servers and a reasonably fast network (10/100 Mbit), a 5% to 20% speedup may be possible when using compression.

Optimized Filters

Advantage Optimized Filters provide industry-leading database filtering optimization. These filters speed table and Sql Where clause processing by using high-speed indexes to filter out data thus drastically reducing the amount of table data that must be retrieved from disk, which leads to greatly improved performance.

High-Speed Locking

The Advantage Database Server uses an intelligent lock management system that eliminates lock retries and network traffic. The Advantage Database Server uses an internal queuing algorithm that allows application locks to occur without making network operating system lock API calls. All locking information is maintained internally in the lock queues. Advantage allows for read-through index locking and immediate index write locking. Read-through index locking increases multi-user index read performance immensely, and the write lock queuing and elimination of lock retries greatly increases multi-user database application performance.

Database Security

Advantage Database Server database security functionality allows you to "hide" files in the database from all users who are not accessing data through Integra. Advantage allows the system administrator to remove network access rights from all users who could potentially damage the database. Once network access rights have been revoked from users to the database directory and/or files, users cannot maliciously or accidentally corrupt the database by writing to the database, creating new files, or deleting existing files in the database because they no longer have access to those files. When the Integra application requests that a file be opened or created by the Advantage Database Server, the Advantage Database Server will open or create the file regardless of the user's network access rights. Advantage's database security allows your Integra application to have full control over who can access the database and how the database can be modified. Third Party reporting and Query tools can be configured to access the Integra database as needed via ODBC Drivers or Advantage API Calls.

Database Stability

Advantage Database Server provides database stability and eliminates database corruption by ensuring that every database operation is executed completely or is not executed at all. Entire database update operations are executed on the server. Therefore, if the application, workstation, or network fails, the database operation will either successfully be transmitted to the Advantage Database Server or not transmitted at all. The status of the application, workstation, and network cannot affect the data in your database. By transmitting entire table and index update operations in one command from the client to the server, Advantage eliminates corruption errors introduced by application, workstation, or network failure.

Flexible Deployment and No Maintenance

With Advantage, Integra can be deployed in stand-alone, peer-to-peer, client/server, and Internet environments with one set of source code. Integra does not require a different set of components and code for local, client/server, and remote database access. Integra can automatically determine if the Advantage Database Server is available directly or via the Advantage Internet Server, or whether the Advantage Local Server must be used. Additionally, Advantage is a "No Maintenance" database in that there is no lengthy periodic backup and restore operation that needs to be performed as may be required with other database solutions. No tuning or adjustments to the server are necessary once Integra is installed and up and running. Advantage provides a significantly lower total cost of ownership (TCO) when compared to other client-server database solutions.

You can learn more about Extended Systems and the Advantage Database Server by visiting <http://www.advantagedatabase.com/>

Integra Energy Management System